

## THREE-STAGE SWITCH FABRIC WITH INPUT DEVICE FEATURES

### ABSTRACT OF THE DISCLOSURE

5 A switch fabric for routing data has a switching stage configured between an input stage and an output stage. The input stage forwards the received data to the switching stage, which routes the data to the output stage, which transmits the data towards destinations. In one aspect, at least one input port can be programmably configured to store data in two or more input routing queues that are associated with a single output port, and at least one output port can be programmably configured to receive data from two or more output routing queues that are associated with a single input port. In another aspect, the output stage transmits status information about the output stage to the input stage, which uses the status information to generate bids to request connections through the switching stage. In yet another aspect, the switching stage transmits a grant/rejection signal to the input stage identifying (1) whether each bid is accepted or rejected and, if rejected, (2) a reason for rejecting the bid, and the input stage determines how to react to a rejected bid based on the reason the bid was rejected.

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